Appl. No. 10/006,992   PATENT
Amendment dated 21 December 2004
Amendment under 37 CFR 1.116 Expedited Procedure
Examining Group 3739

Amendments to the Claims:

Claims 1-17 and 21-35 have been canceled. This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1-17. (Canceled)

18. (Previously Presented) A method of determining an accuracy of a gradient array in an optical tissue measurement comprising:

transmitting an image through the optical tissue;

determining local gradients of the array across the optical tissue from the transmitted image; and

integrating along a closed integration path across a portion of the array.

19. (Original) The method of claim 18, further comprising:

calculating a change in elevation along the closed integration path across the portion of the array.

20. (Original) The method of claim 18 wherein, the closed integration path comprises:

a common starting point, a common ending point, a first integration path connecting the common starting point to the common ending point, and a second integration path connecting the common starting point to the common ending point, the first and second integration paths being different.

21-35. (Canceled)

36.   (Previously Presented) The method of claim 18, further comprising transmitting a source image from a light source posteriorly through the optical tissues and onto the retina to define the image, wherein the image is transmitted posteriorly through a central region of the cornea, the central region having a size which is significantly less than a pupil size of the eye, and wherein the image is transmitted from the retina anteriorly through the optical tissues.

37.   (Previously Presented) The method of claim 36, wherein the image is transmitted by the optical tissues as a plurality of beamlets, wherein each gradient corresponds to an associated portion of an optical surface such that each beamlet is transmitted through the optical tissue according to the corresponding gradient.

38.   (Previously Presented) The method of claim 18 wherein the integration is performed so as to map an error-correcting change in optical tissues.

39.   (Previously Presented) The method of claim 38 wherein the mapping step comprises deriving a proposed change in the optical tissue surface elevations so as to effect a desired change in optical properties of the eye, and further comprising modifying the optical tissue surface according to the proposed change by laser ablation.

40.   (Previously Presented) The method of claim 18, wherein the closed integration path extends from a first center of a first portion of the optical surface to a second center of a second portion of the optical surface, from the second center to a third center of a third portion of the optical surface, and from the third center back to the first center, the first, second and third portions of the optical surface corresponding to the first, second and third gradients of the gradient array, respectively.

41.   (Previously Presented) The method of claim 18, wherein the closed integration path extends from an initial location corresponding to a position between a first gradient array element and a second gradient array element, the path crossing a first portion of

the optical surface corresponding to the second gradient array element, a second portion of the optical surface corresponding to a third gradient array element, and a third portion of the optical surface corresponding to a fourth gradient array element before returning back to the initial location.

42.   (Previously Presented) The method of claim 18, wherein an elevation map is generated directly in the mapping step without deriving coefficients of a series expansion mathematically approximating the optical surface.